

REMARKS

The applicants appreciate the Examiner's careful examination of this case. Reconsideration and re-examination are respectfully requested in view of the instant remarks.

With regard to paragraphs 1 and 2 of the Office Action, the Examiner has rejected Claims 6 – 11 under 35 U.S.C.112, first paragraph, as failing to comply with the written description requirement. The Examiner states that ".....the closest thing in the specification that talks about two different sources is an image generator with multi-channel outputs".

In reply, it is respectfully mentioned that it is well known in the art that each channel of an image generator with multi-channel outputs can be considered as a discrete output or video source. An image generator will typically be able to output some of the channels at a high resolution, one of which would be equatable to the high resolution source of the present invention, with the remaining channels being output at a lower resolution, and these being equatable to the lower resolution sources of the present invention.

The above submission is supported by USA Patent No. 6,574,352 to Skolmoski at column 1 lines 22 – 29 wherein it is stated:

".....such a device uses a head tracked projector and a compact target projector to form images on a dome within which the user is enclosed. A high resolution inset provides good imagery for the foveal vision, and the background forms imagery for the peripheral vision. In such a system, only two-image generator channels are needed to cover the entire field of the dome which is very efficient."

The above quoted paragraph from Skolmoski shows that image generator channels can be considered as discrete sources. As described above, one channel is the video source for the head tracked projector, with the second image generator channel being the source for the compact target projector.

In view of the above submissions, it is respectfully requested that the objection in paragraphs 1 and 2 of the Office Action be re-considered and waived.

With regard to paragraphs 4 – 11 of the Office Action, the claim rejections under 35 U.S.C. 103 (a) have been carefully considered. Claims 6 – 7 and 9 – 11 have been rejected as unpatentable over Lechner et al USA Patent No. 5,487,665 in view of Skolmoski USA Patent No. 6,574,352 and further in view of Harrington et al USA Patent

No. 5,737,455. The Examiner's arguments against the main claim 6 are clearly expressed in paragraph 5 of the Office Action. It is noted that the Examiner agrees that Lechner et al does not specifically teach that the low resolution image is a wide field of view, and the high resolution image is a narrow field of view. For these features, the Examiner needs to rely on Skolmoski. It is also noted that the Examiner agrees that Lechner et al does not disclose combining in a common pixel format of the high resolution image. The Examiner needs to rely on Harrington et al to show this feature. It is observed in general that if the Examiner needs to combine together no less than three patent specifications, then this is itself an indication that the applicants have made an invention.

In specific reply to the Examiner, it is noted that Lechner et al discloses a method in which a low resolution image from a first source is combined with a high resolution image from a second source. The method by which this is achieved is described by Lechner et al at column 1 lines 57 – 60 which state:

"the portion of the video display, from which the background image is blanked, is then replaced with the high resolution inset image. The inset image is generally produced by another projector".

At column 2 lines 37 – 44, Lechner also states the following:

"The visual display system includes both a background image projection means for generating the background image and an inset image generation means for producing video signals representative of a plurality of inset images. The visual display system also includes inset image projection means for generating the plurality of inset images in response to the video signals produced by the inset image generation means."

The invention of Lechner et al requires a separate projection means for projecting the inset image. The invention of the present application does not include separate projection for the inset high resolution image.

The Examiner also cites Lechner et al as disclosing a method to position a high resolution image component anywhere in a display obtained from the image display apparatus, see Lechner et al at column 1 lines 15 – 17 and lines 49 – 55. Lechner et al also states at column 7 lines 41 – 52 the following:

"As illustrated in Figure 1, one embodiment of the visual display system 10 of the present invention includes a plurality of display screens 12, responsive to the background image projection means 20 and the inset projection means 28, for displaying the background image and a plurality of inset images. According to this embodiment, the inset image projection

means includes a plurality of inset image projectors 29, at least one of which is associated with each display screen. Likewise, the background image projection means includes a plurality of background image projectors, at least one of which is associated with each display screen".

It is noted that one inset image projector is associated with each of the display screens as shown in Figure 1 of Lechner et al. An inset image as defined by the sub-raster blocks is therefore not able to be positioned anywhere in the display. A separate sub-raster block is needed for each of the inset image projectors.

With regard to the combination by the Examiner of Lechner et al with the disclosure in Skolmoski at column 1 lines 15 – 20, it is noted that Skolmoski actually states the following:

"many systems provide either high resolution over a narrow field of view or low resolution over a wide field of view.....".

Skolmoski does not disclose a display in which the high and low resolution images are combined in a single display.

At column 1 lines 19 – 24, Skolmoski goes on to state the following:

"Recent simulator projection systems have been developed to give a greater field of view combined with a high resolution image at the user's focal point of interest. Such a device uses a head tracked projector and a compact target projector to form images on a dome within which the user is enclosed."

The above endorses the method disclosed in Lechner et al of having a projector to provide the background image and a separate projector to provide the high resolution inset image.

It is therefore respectfully submitted that the invention of the present application is not obvious when Lechner et al is considered with Skolmoski. Lechner et al and Skolmoski both lead to a solution using a separate projector for the inset high resolution image.

With regard to the Examiner's combination of Lechner et al with Harrington et al, it is noted that Harrington et al describes anti-aliasing problems which arise whenever foreground objects are combined with background images. Harrington et al continues to describe further aspects at column 4 lines 25 – 26, and an example where the low resolution image is continuous tone, and also how the result is stored at the resolution of the background image.

Anti-aliasing can be thought of as "the process of removing or reducing the jagged distortions in curves and diagonal lines so that the lines appear smooth or smoother". In Harrington et al, this is the boundary between the foreground and the background objects, and is used to emphasise the boundary. Also, the method disclosed is specific to the background low resolution image being a continuous tone.

The invention of the present application aims to blend the boundary region between the high resolution image and the low resolution image so that the boundary appears imperceptible. Also, the background image is not a continuous tone image, but is a video source providing typically background scenes of the outside world.

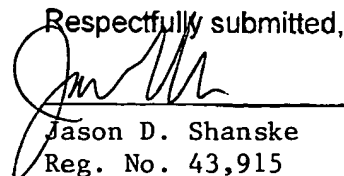
In view of the above submissions, it is believed that it would not be obvious to combine Lechner et al with Skolmoski and Harrington et al in the way suggested by the Examiner. There is no teaching nor suggestion in Lechner et al, Skolmoski and Harrington et al to make the combination suggested by the Examiner and, as indicated above, there are a number of reasons against making the combination.

With regard to the Examiner's objections to Claims 7 – 11 as expressed in paragraphs 6 – 11 of the Office Action, the applicants rely for the patentability of the sub-claims 7 – 11 on the fact that they include all of the features of Claim 6, which claim is believed to be allowable for the reasons mentioned above. For Claim 8 the Examiner's reliance on a fourth patent specification in the form of Kishimoto Japanese Patent No. 10164468A is noted. The need to rely on no less than four patents to reject claim 8 must surely demonstrate invention in itself.

Accordingly, it is respectfully submitted that this application is in condition for allowance. Early and favorable action is respectfully requested.

If for any reason this **RESPONSE** is found to be **INCOMPLETE**, or if at any time it appears that a **TELEPHONE CONFERENCE** with Counsel would help advance prosecution, please telephone the undersigned or one of his associates, collect in Waltham, Massachusetts, at (781) 890-5678.

Respectfully submitted,



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